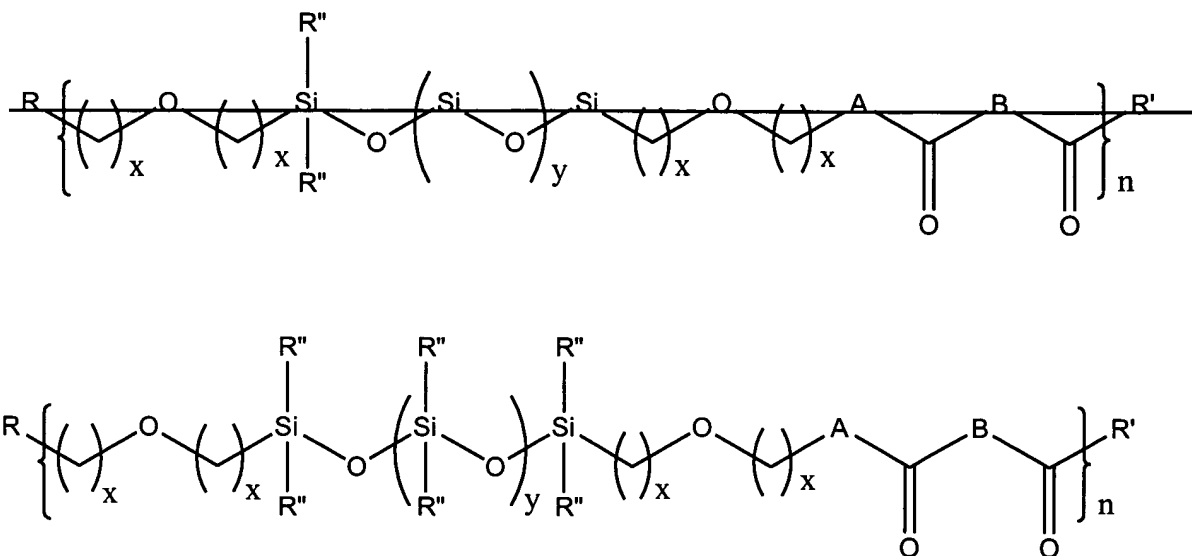


8. (Currently amended) A composition or structure comprising a polyorganosilicone of the formula:



wherein

each of R, R', and R'', independently, is hydrogen, hydroxy, amino, alkoxy, aryl, or aryloxy;

each x, independently, is an integral of 1 to 10;

y is an integral of 1 to 1,000;

n is an integral of 1 to 10,000; [[and]]

~~each of A is O or NH;~~ and

~~B, independently,~~ is alkyl, aryl, or alkoxy.

9. (Currently amended) The composition of claim 8, further comprising a fire retardant.

10-11. (Canceled)

12. (New) A method of synthesizing a polyorganosilicone polymer of claim 7, the method comprising:

mixing linear or cyclic monomers, oligomers, macromers, or a combination thereof to form a monomer mixture;

adding a lipase, esterase, or protease to the monomer mixture to form a reaction mixture; and

reacting the reaction mixture for a time and under polymerizing conditions suitable to obtain the polyorganosilicone polymer.

13. (New) The method of claim 12, further comprising mixing the polymer with a fire-retardant.

14. (New) A method of retarding fire, the method comprising using the polyorganosilicone polymer of claim 7 as a fire-retardant.

15. (New) A method of retarding fire, the method comprising using the composition or structure of claim 9 as a fire-retardant.

16. (New) A method of controlled drug delivery, the method comprising using the polyorganosilicone polymer of claim 7 as a carrier for controlled drug delivery.

17. (New) A method of delivering bio-implants, the method comprising using the polyorganosilicone polymer of claim 7 as a carrier for bio-implants.

18. (New) A method of tissue engineering, the method comprising using the polyorganosilicone polymer of claim 7 as a biodegradable matrix for tissue engineering.

19. (New) A packaging material comprising the polyorganosilicone polymer of claim 7.

20. (New) A thermal insulator comprising the polyorganosilicone polymer of claim 7.

21. (New) An antioxidant agent comprising the polyorganosilicone polymer of claim 7, and free phenolic groups.
22. (New) A photovoltaic device comprising a polyorganosilicone polymer of claim 7, and conjugated polymers.
23. (New) A biosensor device comprising a polyorganosilicone polymer of claim 7, and conjugated polymers.
24. (New) A polyorganosilicone of claim 7, wherein R is hydroxy; R' is alkoxy; R'' is alkyl; A is NH; and B is alkyl.
25. (New) A polyorganosilicone of claim 7, wherein x is one; y is ten; and n is 120.
26. (New) A polyorganosilicone of claim 7, wherein R is hydroxy; R' is alkoxy; R'' is alkyl; x is one; y is ten; n is 120; A is NH; and B is alkyl.